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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/809,717	03/26/2004	Hans-Ove Hagelin	19378.0084	8088

7590 08/31/2006

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EXAMINER

DATSKOVSKIY, SERGEY

ART UNIT	PAPER NUMBER
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2121

DATE MAILED: 08/31/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/809,717

Applicant(s)

HAGELIN, HANS-OVE

Examiner

Sergey Datskovskiy

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 July 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Claims 1-13 have been submitted for examination.
2. Claims 1-13 have been rejected.

Terminal Disclaimer

The terminal disclaimer filed on July 12, 2006 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U.S. Patent No. 6,772,055 has been reviewed and is accepted. The terminal disclaimer has been recorded.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-3 and 11-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Cypher et al. (US Patent No. 5,566,295).

Claim 1

Cypher (295) teaches a method of establishing rules for a device used for generating decision support for user decisions which determine the behavior of an apparatus, a tangible system, or a machine and/or for controlling the behavior

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of an apparatus, a tangible system, or a machine (the device is disclosed as a graphical simulator, which can be a vehicle simulator; see col. 1, lines 29-32), wherein said method comprises the steps of:

a supervising unit arranged to handle a rule system for the behavior (Fig. 1, combination of elements 18,20,22 and 30; col. 6, lines 10-23), wherein the supervising unit comprises at least one storage member in which a rule structure comprising a set of completely or partly ready-formulated rules for the behavior is stored (Fig 1, element 22; col. 6, lines 14-16),

a user interface comprising first means for presenting information to a user of the device (Fig. 1, element 16; col. 6, line 13) and second means for inputting instructions to said supervising unit (Fig. 1, element 14; col. 6, lines 11-12),

wherein the device is arranged such that said rule structure is such that a rule (col. 6, lines 48-50) comprises one or more premises (col. 6, lines 50-53) and one or more conclusions (col. 6, lines 53-58, premises are represented by "before" states which may either occur or not occur during execution, thus being either true or false, and conclusions are represented by "after" states),

wherein the device is arranged such that the rule system is divided into a plurality of states for different parts of said behavior (col. 10, lines 52-53; col. 10, lines 66-67. Behavior is described by rules, where each rule has a simulation context, which is defined as a simulation state), wherein each state comprises one or more of said rules (col. 6, lines 48-50),

wherein the device is arranged to via said first means present a decision support window which comprises at least one area which represents one of said

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states, wherein this area comprises names which identify different rules which form part of the state (Fig. 3C; col. 10, lines 31-34),

running said device in a real or simulated version of said apparatus, a tangible system, a machine or a user thereof such that the apparatus, a tangible system, a machine or a user thereof goes through a behavior or a behavior scenario (disclosed as simulation, see Fig. 7, col. 19, lines 22-28),

presenting said decision support window to a user (Fig. 3C; col. 10, lines 31-34),

recommending, via said decision support window, a said state or rule (Fig. 3C; col. 10, lines 31-34 and 38-43; "recommending" is interpreted as "presenting"; recommended rules are disclosed to be presented in the editor window),

allowing the user to make decisions by, via said second means, inputting instructions which mean that one or more conclusions which form part of a certain rule, the name of which is currently shown in said area in the decision support window, shall be executed (Fig. 8; col. 19, lines 66-67, col. 20, lines 1-5; inputting instructions is disclosed as programming by demonstration),

analyzing the decisions which have been made by the user (col. 20, lines 6-8), and determining or modifying the rules and recommendations for which the user has made decisions concerning that one or more conclusions shall be executed out in accordance with the analysis that has been carried out (Figs. 9A and 9B; col. 20, lines 13-67. Disclosed steps of determining if the simulation context has been adjusted, if an object has been moved, and if a property

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modification has been done, define the content of a new rule that has been generated).

Claim 2

Cypher (295) teaches a method according to claim 1, wherein the device is arranged such that said premises shall be able to either be true or false and wherein said conclusions are predetermined and pre-programmed (col. 6, lines 53-58, premises are represented by "before" states which may either occur or not occur during execution, thus being either true or false, and conclusions are represented by "after" states), and wherein the device is arranged such that said rule structure is such that each premise in the rule can be assigned an indicator (col. 15, lines 29-41) which can indicate at least two different conditions, namely a first condition which means that the premise shall be true and a second condition which means that the premise shall be false (col. 15, lines 50-56, where combining an expression with Boolean operators allow to specify at least two different conditions in the condition menu), wherein at least one conclusion is intended to be executed if all of said premises fulfill the conditions set by the assigned indicators, and wherein said method is such that said rules which are determined or modified in accordance with the analysis which has been carried out are determined or modified in that the premises for these rules are determined or modified in accordance with the analysis which has been carried out (col. 14, lines 26-30).

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Claim 3

Cypher (295) teaches a method according to claim 2, wherein said device is arranged such that said rule structure is such that each premise in the rule also can be assigned an indicator (col. 15, lines 29-41) which can indicate a third condition which means that it does not matter whether the premise is true or false in order for said one or more conclusions to be intended to be executed (col. 15, lines 50-56, where combining an expression with Boolean operators allow to specify at least three different conditions in the condition menu, including the claimed third condition).

Claim 11

Cypher (295) teaches a method according to claim 2, wherein said device is arranged such that the rule structure is such that each conclusion in a rule (col. 6, lines 53-58) is assigned an indicator (col. 15, lines 29-41) which can indicate two different cases, a first case which indicates that the conclusion shall be executed or a second case which indicates that the conclusion shall not be executed, wherein a conclusion is meant to be executed if all of said premises in the rule fulfill the conditions set by the assigned indicators and the indicator of the conclusion indicates said first case (col. 15, lines 29-41; col. 17, lines 17-24. Conclusion here is a resulting part of a rule, where indicator is described by a condition that has to be met for the rule to be executed).

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Claim 12

Cypher (295) teaches a method according to claim 1, wherein said device is arranged such that the rule system is divided into a plurality of rule blocks (col. 10, lines 25-28), each of which comprises one or more rules (col. 6, lines 48-50), wherein each state comprises one or more rule blocks (col. 10, lines 25-28), wherein the rules within a certain rule block concern a certain aspect of the behaviour within the state in question (col. 10, lines 52-53; col. 10, lines 66-67. Behavior is described by rules, where each rule has a simulation context, which is defined as a simulation state) and wherein the device is arranged such that said area in the decision support window also comprises the name of one or more rule blocks which form part of the state (Fig. 3C; col. 10, lines 31-34).

Claim 13

Cypher (295) teaches a method according to claim 1, wherein said device is arranged such that said name of a rule which is shown in said area in the decision support window is shown within a marked area (Fig. 3C; col. 10, lines 31-34), wherein the device is arranged such that the user inputs said instructions, which mean that one or more conclusions which form part of a certain rule shall be executed, by inputting a command when a marker is at or on said marked area (Fig. 8; col. 19, lines 66-67, col. 20, lines 1-5; inputting instructions is disclosed as programming by demonstration, such programming involves dragging and dropping a selected object, see col. 6, lines 60-67).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 4, 6 and 8-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cypher et al. (US Patent No. 5,566,295) in view of McNulty et al. (US Patent No. 4,868,755).

Claim 4

Claim 4 is depended upon claim 2, rejected under 35 U.S.C. §102(b) above.

Cypher (295) fails to teach a method according to claim 2, wherein said device is arranged such that said rules are only partly ready-formulated such that at least a plurality of premises, which can be true or false, are defined for a plurality of said rules, but without these premises yet have been assigned any of said indicators which indicate some of said conditions, wherein when said device is run, it is registered whether said plurality of premises are true or false at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed.

However, McNulty (755) teaches that the device is arranged such that said rules are only partly ready-formulated (col. 8, lines 6-9 discloses partly ready-formulated rules as partial plans) such that at least a plurality of premises, which can be true or false, are defined for a plurality of said rules, but without these premises yet have been assigned any of said indicators which indicate some of said conditions (rules are disclosed as maneuvers, where conclusions are disclosed as goals, and premises are determined based on disclosed parameters and conditionals. See col. 5, lines 5-10, 23-24; col. 4, lines 58-65), wherein when said device is run, it is registered whether said plurality of premises are true or false at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed (col. 7, lines 18-20 discloses registration of rules based on user decisions).

Cypher (295) and McNulty (755) are analogous art since they both can be used in vehicle simulation (see Cypher (295), col. 1, lines 29-32). At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46). The motivation for doing so would have been to model the behavior of a human pilot and, therefore, greatly reduce the time required for development of training courses (McNulty (755), col. 8, lines 10-16). Therefore, it would have been obvious to modify Cypher (295) in view of

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McNulty (755) by combining a vehicle simulator with rules and graphics interface with a learning expert system.

Claim 6

Claim 6 is depended upon claim 1, rejected under 35 U.S.C. §102(b) above.

Cypher (295) teaches a method according to claim 1, wherein said device is arranged such that said rules (col. 6, lines 48-50) comprise a plurality of premises (col. 6, lines 50-53) which comprise at least one parameter which, when a value for this parameter has been determined, causes the premise to have a truth value such that the premise is true or false (col. 9, lines 32-34. Parameters are disclosed as properties associated with objects that may form "before" or "after" states).

However, Cypher (295) fails to teach that said rules are only partly ready-formulated such that at least a plurality of premises are defined without that a value of said parameter has been determined, wherein when said device is run, the value of said parameters are registered at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed.

McNulty (755) teaches that said rules are only partly ready-formulated such that at least a plurality of premises are defined without that a value of said parameter has been determined (col. 8, lines 6-9 discloses partly ready-formulated rules as partial plans), wherein when said device is run, the value of

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said parameters are registered at the occasions when the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed (col. 7, lines 18-20 discloses registration of rules based on user decisions).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

Claim 8

Claim 8 is depended upon claim 2, rejected under 35 U.S.C. §102(b) above.

Cypher (295) fails to teach a method according to claim 2, wherein said device is arranged such that at least a plurality of said rules are ready-formulated in such a manner that at least a plurality of premises are defined for the rules such that the premises have a truth value such that the premises are true or false and such that these premises have been assigned said indicators, wherein the device is arranged such that the user can make decisions which mean that one or more conclusions which form part of a certain rule shall be executed even if the ready-formulated rule in question does not say that the conclusion or conclusions shall be executed, wherein when said device is run, the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall

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be executed, wherein registration takes place, at the occasions when the user makes said decisions, of whether the premises were true or false.

However, McNulty (755) teaches that said device is arranged such that at least a plurality of said rules are ready-formulated in such a manner that at least a plurality of premises are defined for the rules such that the premises have a truth value such that the premises are true or false and such that these premises have been assigned said indicators, wherein the device is arranged such that the user can make decisions which mean that one or more conclusions which form part of a certain rule shall be executed even if the ready-formulated rule in question does not say that the conclusion or conclusions shall be executed, wherein when said device is run, the user makes said decisions which mean that one or more conclusions which form part of a certain rule shall be executed, wherein registration takes place, at the occasions when the user makes said decisions, of whether the premises were true or false.

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

Claim 9

Claim 9 is depended upon claim 8, rejected under 35 U.S.C. §103(a) above.

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Cypher (295) fails to teach a method according to claim 8, further comprising making a comparison between said registrations at the run and said ready-formulated rules.

However, McNulty (755) teaches a method according to claim 8, further comprising making a comparison between said registrations at the run and said ready-formulated rules (col. 7, lines 47-48).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

Claim 10

Claim 10 is depended upon claim 9, rejected under 35 U.S.C. §103(a) above.

Cypher (295) fails to teach a method according to claim 9, further comprising reformulating said ready-formulated rules on the basis of said comparison.

However, McNulty (755) teaches a method according to claim 9, further comprising reformulating said ready-formulated rules on the basis of said comparison (col. 7, lines 27-31, 61).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include user interface and the rules structure from

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Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and combine it with the learning mechanism from McNulty (755) (expert system, col. 41-46), using the same motivation as for claim 4 above.

5. Claims 5 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cypher et al. (US Patent No. 5,566,295) in view of McNulty et al. (US Patent No. 4,868,755) as applied to claims 4 and 6 above, and further in view of Hosaka et al. (US Patent No. 4,930,084).

Claim 5

Claim 5 is depended upon claim 4, rejected under 35 U.S.C. §103(a) above.

Cypher (295) and McNulty (755) teach a method according to claim 4, further comprising, said registration has being done at one or more runs (McNulty (755), col. 7, lines 23-25).

However, Cypher (295) and McNulty (755) fail to teach statistically processing the obtained registrations, thereby establishing ready-formulated rules.

Hosaka (084) teaches statistically processing the obtained registrations (disclosed as using a fuzzy logic with statistical analysis. See col. 4, lines 26-35), thereby establishing ready-formulated rules (Fig. 2, step S16; col. 5, lines 1-7).

Hosaka (084) deals with a vehicle control system, and, therefore, belongs to an analogous art to the combination of Cypher (295) and McNulty (755). At

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the time of the invention, it would have been obvious to a person of ordinary skill in the art to include interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and the learning mechanism from McNulty (755) (expert system, col. 41-46), and combine them with the statistical analysis from Hosaka (084) (col. 4, lines 26-35) using it as a standard decision-making technique in the expert system (McNulty (755), col. 7, lines 51-55). Therefore, it would have been obvious to modify Cypher (295) in view of McNulty (755), and further in view of Hosaka (084) by combining a vehicle simulator with rules and graphics interface with a learning expert system employing a statistical analysis for decision-making.

Claim 7

Claim 7 is depended upon claim 6, rejected under 35 U.S.C. §103(a) above.

Cypher (295) and McNulty (755) teach a method according to claim 6, further comprising, said registrations have being done at one or more runs (McNulty (755), col. 7, lines 23-25).

However, Cypher (295) and McNulty (755) fail to teach statistically processing the obtained registrations (disclosed as using a fuzzy logic with statistical analysis. See col. 4, lines 26-35), thereby establishing suitable values for the parameters in the rules.

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Hosaka (084) teaches statistically processing the obtained registrations, thereby establishing suitable values for the parameters in the rules (Fig. 2, step S16; col. 5, lines 1-7).

At the time of the invention, it would have been obvious to a person of ordinary skill in the art to include interface and the rules structure from Cypher (295) (col. 6, lines 48-58; col. 15, lines 29-41, 50-56) and the learning mechanism from McNulty (755) (expert system, col. 41-46), and combine them with the statistical analysis from Hosaka (084) (col. 4, lines 26-35) using it as a standard decision-making technique in the expert system (McNulty (755), col. 7, lines 51-55), using the same motivation as for claim 5 above.

Response to Arguments

Applicant's arguments filed on July 12, 2006 have been fully considered but they are not persuasive. The unpersuasive arguments made by Applicant are stated below:

In reference to Applicant's argument:

Cypher does not disclose or suggest recommending, via said decision support window, a said state or rule.

Examiner's response:

The common meaning of word "*recommend*" is to present something as worthy of confidence, acceptance, use, etc., or to advice as an alternative; suggest as appropriate, beneficial, or the like. However, Specification does not

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use this common meaning of *recommending*. Instead, it *recommends* rules by simply *presenting* them to the user as being displayed in the decision support window. Therefore, for the purpose of this Office Action, Examiner interprets the term "*recommend*" as "*present*". Cypher discloses recommending rules via decision support window by presenting them to the user via the corresponding editor window (see Fig. 3C; col. 10, lines 31-34 and 38-43).

In reference to Applicant's argument:

Cypher does not disclose or suggest allowing the user to provide input to a behavior that is running, in order to determine which conclusions that form part of a rule of the behavior will be executed.

Examiner's response:

Even though claim 1 contains the limitations of running the device such that the apparatus, a tangible system, or a machine goes through a behavior or a behavior scenario, claim 1 does not specify that input from the user is provided *while* the behavior is running. However, even if that were the case, Cypher discloses accepting inputs from the user while the simulation is running (disclosed as programming by demonstration, see Fig. 8; col. 19, lines 66-67, col. 20, lines 1-5. User is able to modify the simulation context affecting the simulation while it is running. A typical example of such interactive simulation would be a SimCity simulation described in col. 1, lines 29-35).

In reference to Applicant's argument:

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Further though, Cypher does not disclose or suggest modifying the rules themselves based on the user provided input that determined which conclusions would be executed.

Examiner's response:

Cypher discloses determining or modifying the rules for which the user has made decisions and carrying an analysis as recording actions demonstrated by user, *analyzing* these actions, and creating corresponding generalized computer program steps (i.e. rules). (see col. 20, lines 1-8). The rules (disclosed as GRRs) are determined based on user's inputs as shown by algorithm from col. 20, lines 13-67.

In view of presented arguments, claims 1-3 and 11-13 stay rejected under 35 U.S.C. §102(b) as being anticipated by Cypher at al. Therefore, the 35 U.S.C. §103 rejection of claims 4, 6, and 8-10 over Cypher in view of McNulty and the rejection of claims 5 and 7 over Cypher in view of McNulty and further in view of Hosaka are proper due to covering all claimed elements by the corresponding combination of references. Claims 4-10 stay rejected under 35 U.S.C. §103(a).

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sergey Datskovskiy whose telephone number is (571) 272-8188. The examiner can normally be reached on Monday-Friday from 8:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anthony Knight, can be reached on (571) 272-3687. The

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fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

S.D.

Assistant examiner

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A handwritten signature in black ink, appearing to read "Anthony Knight", is written over the printed name.

Anthony Knight

Supervisory Patent Examiner

Technology Center 2100